

AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below.

Claims 1-19. (Cancelled).

20. (Original) A bandgap reference circuit comprising:
- a diode having an anode and a cathode;
 - a first resistor and a second resistor, where the first resistor is coupled between the anode and the second resistor;
 - a proportional to absolute temperature (PTAT) current source for providing a PTAT current, where the PTAT current source is coupled to a node between the first resistor and the second resistor;
 - where a reference voltage is generated at the node between the first resistor and the second resistor.
21. (Original) The bandgap reference circuit of claim 20, further comprising:
- a bias current source for providing a bias current to the diode.
22. (Original) The bandgap reference circuit of claim 20, where the second resistor couples between the first resistor and ground.
23. (Original) The bandgap reference circuit of claim 20, where the emitter is coupled to ground.
24. (Original) The bandgap reference circuit of claim 20, where the reference voltage remains substantially constant in response to variations in temperature.

25. (Previously Presented) A bandgap reference circuit comprising:
a first transistor having an emitter, a collector, and a base, wherein the base is coupled to the collector, and wherein the emitter is coupled to ground;
a first resistor and a second resistor, wherein the first resistor is coupled between the collector and the second resistor, and wherein the second resistor is coupled between the first resistor and ground;
a proportional to absolute temperature (PTAT) current source for providing a PTAT current, wherein the PTAT current source is coupled to a node between the first resistor and the second resistor;
wherein a reference voltage is generated at the node between the first resistor and the second resistor.
26. (Previously Presented) The bandgap reference circuit of claim 25, further comprising a bias current source for providing a bias current to the transistor.
27. (Previously Presented) The bandgap reference circuit of claim 25, where the reference voltage remains substantially constant in response to variations in temperature.
28. (Previously Presented) The bandgap reference circuit of claim 25, where the transistor is a bipolar transistor.
29. (Currently Amended) The bandgap reference circuit of claim 25, further comprising a second transistor and a third transistor coupled to each other, wherein a drain terminal collector of the second transistor is coupled to the collector of the first transistor.
30. (Currently Amended) The bandgap reference circuit of claim 29, where source terminals emitters of the second and third transistor are coupled to each other.
31. (Currently Amended) The bandgap reference circuit of claim 30, where a drain terminal collector of the third transistor is coupled to a node between the first and second resistors.

32. (Currently Amended) The bandgap reference circuit of claim 31, further comprising a fourth and a fifth transistor, wherein gate terminals ~~bases~~ of the second, third, fourth, and fifth transistors are coupled to each other.
33. (Currently Amended) The bandgap reference circuit of claim 32, where the source terminals ~~emitters~~ of the second and third transistors are coupled to source terminals ~~emitters~~ of the fourth and fifth transistors.
34. (Currently Amended) The bandgap reference circuit of claim 33, further comprising a sixth and a seventh transistor, wherein a drain terminal ~~collector~~ of the fourth transistor is coupled to a collector of the sixth transistor, and wherein a drain terminal ~~collector~~ of the fifth transistor is coupled to a collector of the seventh transistor.
35. (Previously Presented) The bandgap reference circuit of claim 34, where bases of the sixth and seventh transistors are coupled to each other.
36. (Previously Presented) The bandgap reference circuit of claim 35, where an emitter of the sixth transistor is coupled to ground.
37. (Previously Presented) The bandgap reference circuit of claim 36, where an emitter of the seventh transistor is coupled to a third resistor.
38. (Previously Presented) The bandgap reference circuit of claim 37, where the third resistor is coupled to ground.